

NWS FORM E-19 (COVER)

U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL WEATHER SERVICE

REPORT ON RIVER GAGE STATION

REVISED, PRINTED DATES: 09/03/2009, 08/22/2010

LOCATION: GRAND ISLAND
STREAM: PLATTE RIVER
BASIN: PLATTE 9

HSA: GID

REFERENCES:

ANNUAL FLOOD SUMMARIES FOR OMAHA DISTRICT - CORPS OF ENGINEERS
GRAND ISLAND INDEPENDENT - NEWSPAPER
USGS FORM 9-197 - JUN 1982
USGS STATION DESCRIPTION - 1/20/2009
WATER RESOURCES DATA FOR NE - USGS
WS FORM E-19 - AUG 1980

ABBREVIATIONS:

BM - bench mark	EPA - Environmental Protection Agency
DS - downstream	IBWC - International Boundary and Water Comm.
US - upstream	MSRC - Mississippi River Commission
HW - high water	MORC - Missouri River Commission
LW - low water	NOAA - National Oceanic and Atmospheric Admin.
RB - right bank	NOS - National Ocean Survey
LB - left bank	NWS - National Weather Service
MGL - mean gulf level	TVA - Tennessee Valley Authority
MLW - mean low water	USACE - U.S. Army Corps of Engineers
MSL - mean sea level	USBR - U.S. Bureau of Reclamation
MLT - mean low tide	USGS - U.S. Geological Survey
MT - mean tide	USWB - U.S. Weather Bureau
WQ - water quality	NGVD - National Geodetic Vertical Datum
RM - reference mark	NAD - North American Datum
RP - reference point	

LOCATION IDENTIFICATION: GRIN1
NWS INDEX NUMBER: 25339009
USGS NUMBER: 06770500

MAP OF GAGE LOCATION

LATITUDE: 40 52 28 SOURCE: USGS
LONGITUDE: 98 16 54

LOCATION: PLATTE RIVER NEAR GRAND ISLAND, NE
ID: GRIN1 HSA: GID

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BENCHMARKS

ELEVATION OF GAGE ZERO: 1829.900 VERTICAL DATUM: NGVD 1929
LEVELING AGENCY AND DATE: 6/27/2006 CHECKBAR: 18.880
RATING AGENCY: USGS

BENCHMARK	DESCRIPTION	GAGE ZERO	DATUM
RM5	A STANDARD TABLET ON RIGHT END OF LEFT DOWNSTREAM WING WALL OF BRIDGE AND 17 FT UPSTREAM OF GAGE.	17.060	1846.960
RM6	RM6 IS A CHISELED X ON TOP OF SHOREWARD DOWNSTREAM CORNER OF SHOREWARD DOWNSTREAM LEG OF SHELTER PLATFORM.	13.714	1843.614
RM7	RM 7 IS A CHISELED SQUARE ON THE RIGHT END OF THE LEFT UPSTREAM BRIDGE WINGWALL.	17.028	1846.928

LOCATION: PLATTE RIVER NEAR GRAND ISLAND, NE
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GAGES

DCP

TELEM

NESS ID: CE50F614
 OWNER: USGS
 REPORT TIME: 020500
 INTERVAL: 240

TYPE OF TELEMETRY: dedicated
 OWNER: USGS
 PHONE NUMBER:
 INTERVAL:
 PAYOR/COST OF LINE: Unk / \$

GAGE TYPE	OWNER	MAINTENANCE	BEGAN	ENDED	GAGE LOCATION/REMARKS
chain	USGS	USGS	05/25/1933	05/12/1947	CHAIN GAGE INSTALLED BY THE USGS ON UPSTREAM GUARDRAIL OF OLD HIGHWAY 34 BRIDGE LOCATED 68 FEET DOWNSTREAM.
wireweight	USGS	USGS	05/12/1947	05/31/1969	WIRE WEIGHT GAGE REPLACED THE CHAIN GAGE ON UPSTREAM RAIL OF BRIDGE.
wireweight	USGS	USGS	05/12/1969	10/20/1970	AN AUXILIARY WIRE WEIGHT GAGE WAS INSTALLED AT NORTH CHANNEL ON DOWNSTREAM SIDE OF BRIDGE ON OLD HIGHWAY 281, SOUTH OF TOWN TO SERVE AS TEMPORARY GAGE IF IT BECAME NECESSARY TO MOVE GAGE DURING NEW BRIDGE CONSTRUCTION.
wireweight	USGS	USGS	10/20/1970		A NEW WIRE WEIGHT GAGE WAS INSTALLED ON DOWNSTREAM RAIL OF BRIDGE. ON 10/20/70, GAGE WAS MOVED FROM THE OLD BRIDGE TO THE DOWNSTREAM SIDE OF THE NEW BRIDGE, LOCATED 105 FT. UPSTREAM FROM OLD BRIDGE.
bubble	USGS	USGS	08/26/1980	03/25/1998	MANOMETER AND RECORDER INSTALLED 8/26/80 AND THE MANOMETER WAS REMOVED 3/25/98.
Unk	USGS	USGS	08/26/1980	03/25/1998	RECORDER AND MANOMETER INSTALLED IN 5x5 FT. METAL SHELTER AT PRESENT SITE. INSIDE GAGES ARE THE DCP AND A-35 AND ADR RECORDERS, WHICH ARE ALL DRIVEN BY A BUBBLER GAGE.
crest	USGS	USGS	05/18/1982		A CREST STAGE INDICATOR WAS INSTALLED 5/18/82.
bubble	USGS	COE	08/01/1982		USGS INSTALLED A DATA COLLECTION PLATFORM FOR THE CORPS OF ENGINEERS. A SUTRON 8210 DCP DRIVEN BY A SUTRON ACUBAR IN 5X5 METAL SHELTER.

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HISTORY

PUBLICATION/LOCATION OF RECORDS	STARTING DATE	ENDING DATE
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WRD NE	05/25/1933	

TYPE OF GAGE	OWNER	STARTING DATE	ENDING DATE
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chain	USGS	05/25/1933	05/12/1947
wireweight	USGS	05/12/1947	05/31/1969
wireweight	USGS	05/12/1969	10/20/1970
wireweight	USGS	10/20/1970	
bubble	USGS	08/26/1980	03/25/1998
Unk	USGS	08/26/1980	03/25/1998
crest	USGS	05/18/1982	
bubble	USGS	08/01/1982	

ZERO ELEVATION	STARTING DATE
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1829.900	05/25/1933
1831.900	08/20/1980
1829.900	08/22/2002

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CRESTS

FLOOD STAGE: 6.50 ACTION STAGE: 5.50 BANKFULL STAGE: 6.00
 FLOOD FLOW: 12760 ACTION FLOW: 6380

DATE OF CREST	TIME LST	CREST (ft)	FLOW (CFS)	FROM HIGH WATERMARKS	BASED ON OLD DATUM	CAUSED BY ICE JAM	REMARKS
03/05/1934	UNDEF	6.27	7580				RAISED CREST STAGE 2 FT DUE TO DATUM CHANGE 2002.
06/06/1935	UNDEF	5.99	30000				Maximum discharge since 1933.
03/06/1936	UNDEF	-0.99	15000				
03/07/1937	UNDEF	5.92	5390				RAISED 2 FT DUE TO DATUM CHANGE 2002.
03/02/1938	UNDEF	-0.99	10000				
03/19/1939	UNDEF	6.28	9720				RAISED CREST STAGE 2 FT DUE TO DATUM CHANGE 2002.
03/05/1940	UNDEF	-0.99	8000				
02/06/1941	UNDEF	-0.99	1860				
05/06/1942	UNDEF	6.96	15300				RAISED CREST STAGE 2 FT DUE TO DATUM CHANGE 2002.
07/05/1943	UNDEF	5.75	4930				RAISED 2 FT DUE TO DATUM CHANGE 2002.
05/13/1944	UNDEF	5.84	5450				RAISED 2 FT DUE TO DATUM CHANGE 2002.
06/11/1945	UNDEF	5.99	6420				RAISED CREST STAGE 2 FT DUE TO DATUM CHANGE 2002.
03/17/1946	UNDEF	5.64	4150				RAISED 2 FT DUE TO DATUM CHANGE IN 2002.
06/23/1947	UNDEF	7.66	20300				CREST HISTORY ADJUSTED 2 FT TO ACCOUNT FOR DATUM CHANGE 9/02.
03/19/1948	UNDEF	7.47	15900				RAISED 2 FT DUE TO DATUM CHANGE IN 2002.
06/26/1949	UNDEF	6.89	14100				RAISED 2 FT DUE TO DATUM CHANGE IN 2002.
05/09/1950	UNDEF	5.60	4310				RAISED 2 FT DUE TO DATUM CHANGE IN 2002.
05/19/1951	UNDEF	6.13	7060				RAISED 2 FT DUE TO DATUM CHANGE IN 2002.
03/27/1952	UNDEF	6.35	7800				RAISED 2 FT DUE TO DATUM CHANGE IN 2002.
03/06/1953	UNDEF	5.38	2970				RAISED 2 FT DUE TO DATUM CHANGE IN 2002.
02/22/1954	UNDEF	5.40	3450				RAISED 2 FT DUE TO DATUM CHANGE IN 2002.
03/10/1955	UNDEF	6.02	4500				RAISED 2 FT DUE TO DATUM CHANGE IN 2002.
03/01/1956	UNDEF	6.22	1860				RAISED 2 FT DUE TO DATUM CHANGE IN 2002.
05/27/1957	UNDEF	6.08	5830				RAISED 2 FT DUE TO DATUM CHANGE IN 2002.
04/03/1958	UNDEF	5.61	4680				RAISED 2 FT DUE TO DATUM CHANGE IN 2002.
03/26/1959	UNDEF	5.44	4000				RAISED 2 FT DUE TO DATUM CHANGE IN 2002.
03/27/1960	UNDEF	6.16	0			X	Flow was affected by backwater from ice.
05/23/1961	UNDEF	5.97	5430				RAISED 2 FT DUE TO DATUM CHANGE IN 2002.
06/11/1962	UNDEF	6.07	7000				RAISED 2 FT DUE TO DATUM CHANGE IN 2002.
02/18/1963	UNDEF	-0.99	3400				
04/26/1964	UNDEF	5.47	3380				RAISED 2 FT DUE TO DATUM CHANGE IN 2002.
06/29/1965	UNDEF	6.84	12300				RAISED 2 FT DUE TO DATUM CHANGE IN 2002.
10/01/1965	UNDEF	5.58	4940				RAISED 2 FT DUE TO DATUM CHANGE IN 2002.
06/14/1967	UNDEF	7.52	18000				CREST HISTORY STAGE ADJUSTED 2 FT TO ACCOUNT FOR DATUM CHANGE 9/02.
06/25/1968	UNDEF	5.35	3800				RAISED 2 FT DUE TO DATUM CHANGE IN 2002.
03/20/1969	UNDEF	6.97	7400				RAISED 2 FT DUE TO DATUM CHANGE IN 2002.
06/28/1970	UNDEF	5.48	6910				RAISED 2 FT DUE TO DATUM CHANGE IN 2002.
06/14/1971	UNDEF	6.56	11800				RAISED 2 FT DUE TO DATUM CHANGE IN 2002.
05/06/1972	UNDEF	5.38	4750				RAISED 2 FT DUE TO DATUM CHANGE IN 2002.
06/01/1973	UNDEF	7.35	17800				CREST HISTORY ADJUSTED 2 FT TO ACCOUNT FOR DATUM CHANGE 9/02.
04/14/1974	UNDEF	5.90	7770				RAISED 2 FT DUE TO DATUM CHANGE IN 2002.
06/23/1975	UNDEF	5.66	5740				RAISED 2 FT DUE TO DATUM CHANGE IN 2002.

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DATE OF CREST	TIME LST	CREST (ft)	FLOW (CFS)	FROM HIGH WATERMARKS	BASED ON OLD DATUM	CAUSED BY ICE JAM	REMARKS
02/12/1976	UNDEF	5.30	4300				RAISED 2 FT DUE TO DATUM CHANGE IN 2002.
05/24/1977	UNDEF	5.45	4550				RAISED 2 FT DUE TO DATUM CHANGE IN 2002.
03/17/1978	UNDEF	7.45	11100			X	CREST HISTORY ADJUSTED 2 FT TO ACCOUNT FOR DATUM CHANGE 9/02.
06/29/1979	UNDEF	5.60	6010				RAISED 2 FT DUE TO DATUM CHANGE IN 2002.
06/04/1980	UNDEF	6.82	13400				CREST HISTORY STAGE ADJUSTED 2 FT TO ACCOUNT FOR DATUM CHANGE 9/02.
07/31/1981	UNDEF	5.08	3690				RAISED 2 FT DUE TO DATUM CHANGE IN 2002.
05/25/1982	UNDEF	4.94	2650				RAISED 2 FT DUE TO DATUM CHANGE IN 2002.
06/30/1983	18:00	7.97	23900				CREST HISTORY ADJUSTED 2 FT TO ACCOUNT FOR DATUM CHANGE 9/02.
06/15/1984	UNDEF	7.17	16000				CREST HISTORY STAGE ADJUSTED 2 FT TO ACCOUNT FOR DATUM CHANGE 9/02.
02/26/1985	UNDEF	7.00	9000			X	CREST HISTORY STAGE ADJUSTED 2 FT TO ACCOUNT FOR DATUM CHANGE 9/02.
02/25/1986	UNDEF	5.78	7460				RAISED 2 FT DUE TO DATUM CHANGE IN 2002.
04/01/1987	UNDEF	5.96	7970				RAISED CREST STAGE 2 FT DUE TO DATUM CHANGE IN 2002.
02/25/1988	UNDEF	6.22	6080				CREST HISTORY STAGE ADJUSTED 2 FT TO ACCOUNT FOR DATUM CHANGE 9/02.
06/27/1989	UNDEF	5.98	6800				CREST HISTORY STAGE ADJUSTED 2 FT TO ACCOUNT FOR DATUM CHANGE 9/02.
05/05/1990	UNDEF	4.79	2890				CREST HISTORY STAGE ADJUSTED 2 FT TO ACCOUNT FOR DATUM CHANGE 9/02.
06/01/1991	UNDEF	5.53	5690				CREST HISTORY STAGE ADJUSTED 2 FT TO ACCOUNT FOR DATUM CHANGE 9/02.
03/08/1992	UNDEF	4.75	2770				CREST HISTORY STAGE ADJUSTED 2 FT TO ACCOUNT FOR DATUM CHANGE 9/02.
03/12/1993	UNDEF	6.75	13200				CREST HISTORY ADJUSTED 2 FT TO ACCOUNT FOR DATUM CHANGE 9/02.
03/06/1994	UNDEF	5.69	6690				CREST HISTORY STAGE ADJUSTED 2 FT TO ACCOUNT FOR DATUM CHANGE 9/02.
06/12/1995	UNDEF	7.42	16200				CREST HISTORY ADJUSTED 2 FT HIGHER TO ACCOUNT FOR DATUM CHANGE 9/02.
05/29/1996	UNDEF	5.32	6430				CREST HISTORY ADJUSTED 2 FT HIGHER TO ACCOUNT FOR DATUM CHANGE 9/02.
06/24/1997	UNDEF	6.17	9260			X	CREST HISTORY ADJUSTED 2 FT HIGHER TO ACCOUNT FOR DATUM CHANGE 9/02.
04/08/1998	UNDEF	5.94	7800				CREST HISTORY RAISED 2 FT TO ACCOUNT FOR DATUM CHANGE 9/02.
05/13/1999	UNDEF	6.62	12300				CREST HISTORY ADJUSTED 2 FT HIGHER TO ACCOUNT FOR DATUM CHANGE 9/02.
10/07/1999	UNDEF	4.84	4040				CREST HISTORY RAISED 2 FT HIGHER TO ACCOUNT FOR DATUM CHANGE 9/02.
03/04/2001	UNDEF	4.04				X	Maximum peak stage for the year due to backwater from ice.
05/07/2001	UNDEF	2.78	3390				Maximum peak flow and associated stage height for the year.
03/19/2002	UNDEF	6.26	2220				CREST HISTORY ADJUSTED 2 FT HIGHER TO ACCOUNT FOR DATUM CHANGE 9/02.
05/05/2003	UNDEF	4.10	1580				
02/29/2004	UNDEF	4.34	1720				

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DATE OF CREST	TIME LST	CREST (ft)	FLOW (CFS)	FROM HIGH WATERMARKS	BASED ON OLD DATUM	CAUSED BY ICE JAM	REMARKS
05/13/2005	05:03	5.87	8032				TIME IN GMT.
12/26/2005	UNDEF	4.40				X	Backwater from ice.
03/31/2006	UNDEF	4.07	1410				
02/23/2007	UNDEF	5.84	7300				
05/28/2008	03:00	7.01	16311				

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LOW WATER RECORDS

DATE OF LOW WATER	STAGE (ft)	FLOW (CFS)	REMARKS
06/01/1933	1.00	3	NO FLOW AT TIMES MANY YEARS
08/10/1990		38	Minimum daily discharge for the year.
09/03/1991		5	Minimum daily discharge for the year.
09/23/1992		112	Lowest daily mean for the year.
10/01/1992		277	Lowest daily mean for the year.
09/01/1994		229	Lowest daily mean for the year.
11/03/1994		353	Lowest daily mean for the year.
02/05/1996		780	Lowest daily mean for the year.
07/23/1997		310	Lowest daily mean for the year.
08/24/1998		423	Lowest daily mean for the year.
07/31/1999		746	Lowest daily mean for the year.
09/19/2000		373	Lowest daily mean for the year.
07/02/2001		321	Lowest daily mean for the year.
08/05/2002		0	Lowest daily mean for the year.
07/25/2003		0	Lowest daily mean for the year.
10/01/2003		0	No flow at times in many years.
10/01/2004		0	Lowest daily mean for the year.
07/17/2006		0	Lowest daily mean for the year.
01/13/2007		71	Lowest daily mean for the year.
09/27/2008		172	Lowest daily mean for the year.

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CONDITIONS AFFECTING FLOW

MILES ABOVE MOUTH: 70.0 DRAINAGE AREA: 52940.0 POOL STAGE: 0.0

STREAM BED: COMPOSED MAINLY OF SAND AND SILT.

REACH: UPSTREAM TO ODESSA BRIDGE, DOWNSTREAM TO MOUTH OF WOOD RIVER.

REGULATION: AFFECTED BY LAKE McCONAUGHY, AND RESERVOIRS IN WYOMING.
EFFECT: TOTALLY CONTROL FLOWS YEAR ROUND, ESPECIALLY DURING HIGH MOUNTAIN SNOWMELT DURING MAY AND JUNE.

DIVERSION: DIVERTED BY EXTENSIVE IRRIGATION CANALS.

WINTER: CHANNEL SUBJECT TO FREEZING, ANCHOR ICE, AND ICE JAMS.

TOPOGRAPHY: CHANNEL IN VICINITY OF GAGE IS EXTREMELY WIDE AND SHALLOW. BANKS IN THE AREA ARE LOW AND COVERED WITH TREES AND VEGETATION, BUT ARE SELDOM SUBJECT TO OVERBANK FLOW. THE BED SHIFTS READILY AND USUALLY SCOURS AND FILLS WITH STAGE CHANGES.

REMARKS:

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DAMAGE	
STAGE	AREAS AFFECTED
6.50	AT FLOOD STAGE...OVERFLOWS BEGIN ONTO LOWLANDS.
7.00	SOME ISOLATED FARMSTEADS MAY THREATENED BY OVERFLOWS. NO URBAN AREAS...INCLUDING GRAND ISLAND...ARE AFFECTED BY THE FLOODING.

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RIVER STAGE DATA

7.00 - SOME ISOLATED FARMSTEADS MAY THREATENED BY OVERFLOWS. NO URBAN AREAS...INCLUDING
 GRAND ISLAND...ARE AFFECTED BY THE FLOODING.
 6.50 - AT FLOOD STAGE...OVERFLOWS BEGIN ONTO LOWLANDS.

9-		
8-	7.97	06/30/1983
	7.66	06/23/1947
	7.52	06/14/1967
	7.35	06/01/1973
7-	7.17	06/15/1984
	7.00	02/26/1985
	6.75	03/12/1993
	6.56	06/14/1971
	6.35	03/27/1952
6-	6.17	06/24/1997
	5.99	06/11/1945
	5.78	02/25/1986
	5.60	05/09/1950
	5.40	02/22/1954
5-	5.08	07/31/1981
	4.94	05/25/1982
	4.79	05/05/1990
	4.40	12/26/2005
4-	4.10	05/05/2003
3-		
	2.78	05/07/2001
2-		
1-		
0-		
-1-	-0.99	02/18/1963

REACH: UPSTREAM TO ODESSA BRIDGE, DOWNSTREAM TO MOUTH OF WOOD RIVER.

ELEVATION ZERO: 1829.90

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CONTACTS

SQ	CONTACT/REMARKS	PHONE
1	GRAND ISLAND EM	308-385-5360
2	USGS NORTH PLATTE OFFICE MAINTENANCE.	308-532-5323

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